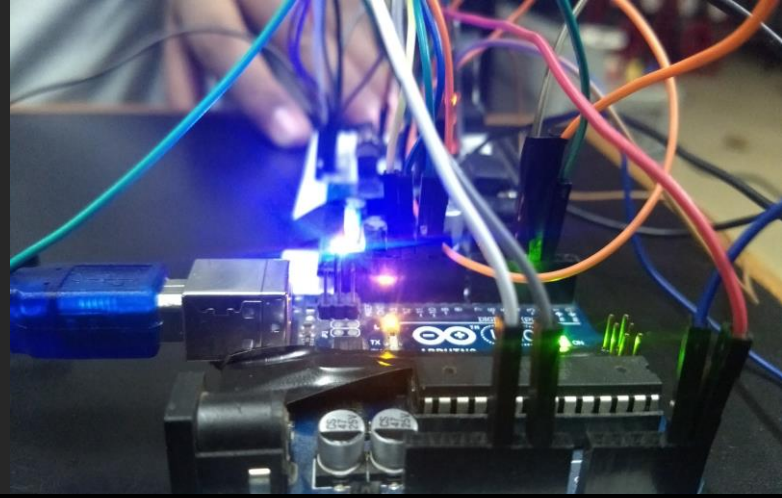


The Circuit



12th EDITION

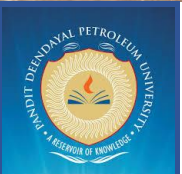
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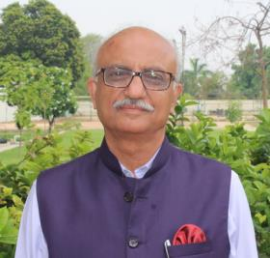


Electrical Engineering ● Newsletter

Jul'20 – Sep'20

NAAC
accreditation
with "A" Grade
& CGPA of 3.39
out of 4.00





From the Director
School of Technology
Prof. Sunil Khanna

Cheerful greetings to all from the School of Technology at Pandit Deendayal Petroleum University (PDPU) Gandhinagar - our wonderland of technology development and engineering education. I am pleased to bring you the second edition of the Electrical departmental newsletter, **The Circuit**, describing many of the departmental activities and accomplishments since July 2020 until today.

It has been very interesting semester at PDPU, as we have been engaged in searches of new faculty members in line with the students achieving higher numbers in gaining industrial placements and opting for higher studies. Meanwhile, the Electrical department continues to do what we do best: carrying out exciting research and preparing the next generation of electrical engineers to enter the workforce. Since its inception, the department has strived hard to comply with the University's vision of imparting world-class education in the field of Energy Engineering and Management. I extend my warm wishes to the department and welcome you to **The Circuit**.



From the Head
Electrical Engineering
Dr. Praghresh Bhatt

It gives me immense pleasure and joy to introduce you to another edition of our departmental newsletter: **The Circuit**. The contents of the letter have been bifurcated into two major sections: (1) *Faculty News*: faculty visits to other organizations, invited talks, lectures delivered, scientific breakthroughs in terms of publications have been highlighted; and (2) *Student Spotlight*: as the name suggests, brings forth all the achievements and accomplishments of the students, prizes won, participatory events, projects under execution, etc. The Department of Electrical Engineering (EED) was established in 2010 since the inception of School of Technology, PDPU. EED offers B. Tech., M. Tech. with specialization in power systems and Ph.D. programs. The department has state-of-art laboratories with modern equipment and software package so that the students have better opportunity to learn practical aspects of engineering problems.

If you see anything in **The Circuit** that strikes a chord, please feel free to call or drop me a line at <eehod@sot.pdpu.ac.in>.

PDPU's VISION:

To be an internationally renowned & respected institution imparting excellent education & training based upon the foundation of futuristic research & innovations.

PDPU'S MISSION:

1. Undertake unique obligation for education in energy engineering and management with special responsibilities in domain specific aspects of energy & infrastructure.
2. Seek to nurture students of extraordinary motivation and ability and prepare them for lifelong learning and leadership in an increasingly knowledge driven world.
3. Envisage to establish institutes of excellence in education, competitive edge in research and real time relevance with futuristic thrusts in offering of programmes and undertaking of activities and projects.

SoT's VISION:

To be an internationally renowned and recognized institute imparting technical education, research & training for societal impact and sustainable development.

SoT's MISSION:

1. Undertake unique obligation for education in energy and engineering with special responsibilities in domain specific aspects of energy & infrastructure.
2. Seek to nurture students of extraordinary motivation and ability and prepare them for lifelong learning and leadership in an increasingly knowledge driven world.
3. Envisage to establish departments for excellent education, cutting edge research and training by offering programmes, to address futuristic needs.

DEPARTMENT'S VISION:

To be recognized globally for excellence in education, research and training in the field of Electrical Engineering by preparing graduates for tomorrow creating high societal impact.

DEPARTMENT'S MISSION:

1. To offer good quality under-graduate, post-graduate and doctoral programmes for preparing globally competitive graduates in electrical engineering.
2. To provide state-of-the-art resources that contribute to achieve excellence in teaching learning, research and skill development activities.
3. To impart knowledge driven, technologically delivered and research augmented excellent education.
4. To motivate the students for life-long learning and to inculcate leadership qualities in an increasingly knowledge driven world.

Mission Element	Mission Element
M1	Globally Competitive (Energy and Engineering)
M2	Skill Development
M3	Excellent Education
M4	Life-Long Learning
M5	Leadership

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

1. To prepare highly competent graduates with strong foundation in engineering and technology for successful career in industries, academics and research organizations.
2. To prepare the graduates with ability to identify, analyze, design and solve complex electrical engineering problems, based on application of basic sciences, mathematics and fundamentals of electrical engineering.
3. To prepare fundamentally strong graduates having broad knowledge in electrical engineering that can become innovators or entrepreneur to solve industrial and societal challenges.
4. To prepare graduates with holistic education approach that they should contribute ethically in multicultural and multidisciplinary groups to develop sustainable solutions for global, environmental and social issues.

PROGRAM OUTCOMES (PO):

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOS)

PSO1: To identify, formulate, design and investigate various problems related to electrical circuits, power electronics, electrical machines and power systems by applying fundamental knowledge of engineering and science

PSO2: To demonstrate proficiency in usage of modern hardware & software tools to model, design, simulate and analyze electrical systems for solving real world multi-disciplinary problems

PSO3: To contribute in development of smart systems, modern grid and clean energy system for societal and environmental benefits.

Faculty News

Workshops/STTPs Conducted

Department conducted a 8-day online training programme on “Green Technologies for Sustainable Energy Systems - Success Stories and Way Forward” in collaboration with Dr. Ambedkar Institute of Productivity (AIP), National Productivity Council (NPC), Chennai.

The event’s inaugural session was graced by dignitaries such as Hon’ble Director General of PDP: **Prof. S S Manoharan**; Hon’ble Director General of NPC India: **Sh. A K Jha**, IES, Addl. Secretary, Govt. of India; Director, SOT: **Prof. Sunil Khanna**; Director (CETEE/Energy), AIP-NPC, Chennai: **Sh. Suryanarayanan**; Head, Electrical: **Dr. Praghness Bhatt** and Deputy Director, AIP-NPC, Chennai: **Smt. P. Chitra**.

The programme was attended by more than 50 participants and the experts were speakers from reputed institutes and organizations such as Indian Institute of Technologies, National Institute of Technologies, GETCO, TERI, Adani (Infra), AMU Aligarh, University of Windsor, AEEE-India, RGIPT Bengaluru, CBRI Roorkee and more.

Invited Talks / Guest Lectures Delivered

- ❖ **Dr. Praghness Bhatt** delivered an expert lecture on “Distributed Generation” at the joint EED, PDP - AIP, NPC e-training programme on *Green Technologies for Sustainable Energy Systems - Success Stories and Way Forward*, September 2020.
- ❖ **Dr. Amit Sant** delivered an expert lecture on “Grid integration of Wind Energy Conversion Systems” at the joint EED, PDP - AIP, NPC e-training programme on *Green Technologies for Sustainable Energy Systems - Success Stories and Way Forward*, September 2020.
- ❖ **Dr. V S K V Harish** delivered an expert lecture on “Smart Building Energy Control Systems” at the joint EED, PDP - AIP, NPC e-training programme on *Green Technologies for Sustainable Energy Systems - Success Stories and Way Forward*, September 2020.

Faculty News

Achievements

- ❖ **Dr. Siddharth Joshi** is elevated in IEEE as a senior member by IEEE society at 17th August 2020.
- ❖ **Dr. Siddharth Joshi** is promoted as a Member in IETE professional body.
- ❖ **Dr. Anilkumar Marakana** extended his services as an “Evaluator” at Virtual summer Interdisciplinary Internship on the theme ideas for new normal at GSFC University, Vadodara during 8th to 14th July 2020.

Team of *The Circuit*

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Dr. V S K V Harish,

Coordinator

Harish.VSKV@sot.pdpu.ac.in

Dr Siddharth Joshi

Faculty News

Dr Alok Jain

Faculty News

Mr. T V Pavan Kumar

Students' Spotlight

Mr. Vipin Shukla

Students' Spotlight

Sh. Sanjay Prajapati and Sh. Sachin

Sh. Meet Patel

Editing